Effective Project Management for Public Health IT Initiatives

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Public Health Information Network Conference

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Effective Project Management

v2.0

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Agenda

- Challenges of Public Health IT Projects
- Project Management Tips
- Recommendations
- Q&A
- Reference Material

Public Health IT Challenges

- Sense of urgency
- High visibility
- Federal regulations
- Shrinking budgets & resources
- Risks include:
  - Limited architectural standards
  - Cross agency communications
  - Use of IT in new areas of technology
  - Loosely defined requirements

(PHIN Conf. helps address these)

Agenda

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Tip 1: Understand Business Vision

- IT PM must be more than a technologist
- Understand stakeholder's business
  - Formal stakeholder interviews
  - Goals, challenges, future direction
  - Fundamental to earning trust
  - How project will impact other organizations
- Articulate technology solution in business terms
- Assist stakeholders prioritize scope
- Communicate business impacts to developers
- If project doesn't meet strategic goals, it is at risk

Tip 2: Manage by Influence

- Proactive leadership
  - See a need
  - Take initiative to meet that need (stick your neck out)
  - Confidence to be the 1st to meet the need
- Adapt to rapidly changing situations

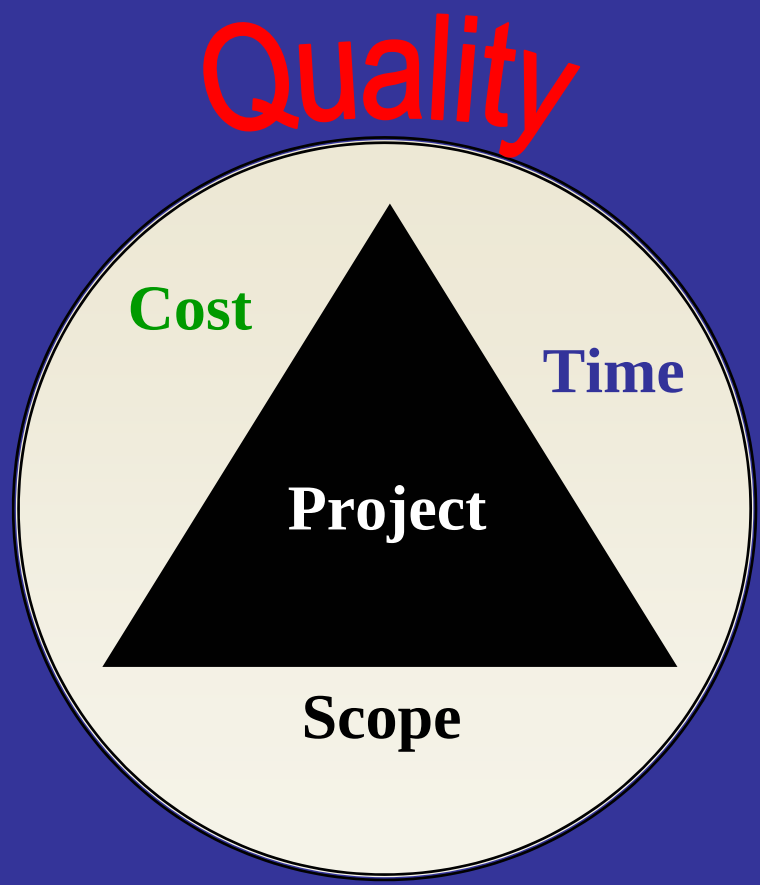
➔ Ability to persuade others to join you

➔ Not dependant on authority given

➔ This ability is fundamental to all PM success

Tip 3: Manage the Triple Constraints

- *Constraint*: "External factor required for project success"
- Educate customers early
- *Process*:
  - Customer fixes any two
  - PM controls third
- *Quality*: "Meeting agreed to, documented requirements for scope, time, cost"



Tip 4: Plan for the Unknowns

- Risk Mgmt Goal: to "limit" the impact of surprises
  - Decrease probability and/or impact of uncertainties
- "Armageddon" approach: solve problems while small
- Risk Mgmt Process
  1. Identify potential risks (to schedule, scope, costs, etc.)
  2. Qualify / analyze / prioritize risks
  3. Plan risk response (avoid, mitigate, accept, transfer)
  4. Monitor risks during project
- Maintain Risk Log
- Biggest problem: failing to plan for risks

Tip 5: Manage Changes to Scope & Requirements

- Customer requirements *will change*, so plan for it
- Have a formal process for managing scope
- Change Management Plan
  - Who can submit Change Requests (CRs)
  - ➔ CR impact upon scope, schedule, costs, risks
  - How the Change Control Board (CCB) operates
  - Change Control Escalations
- PM must "sell" this process to the stakeholders

Tip 6: Plan the Work, Work the Plan

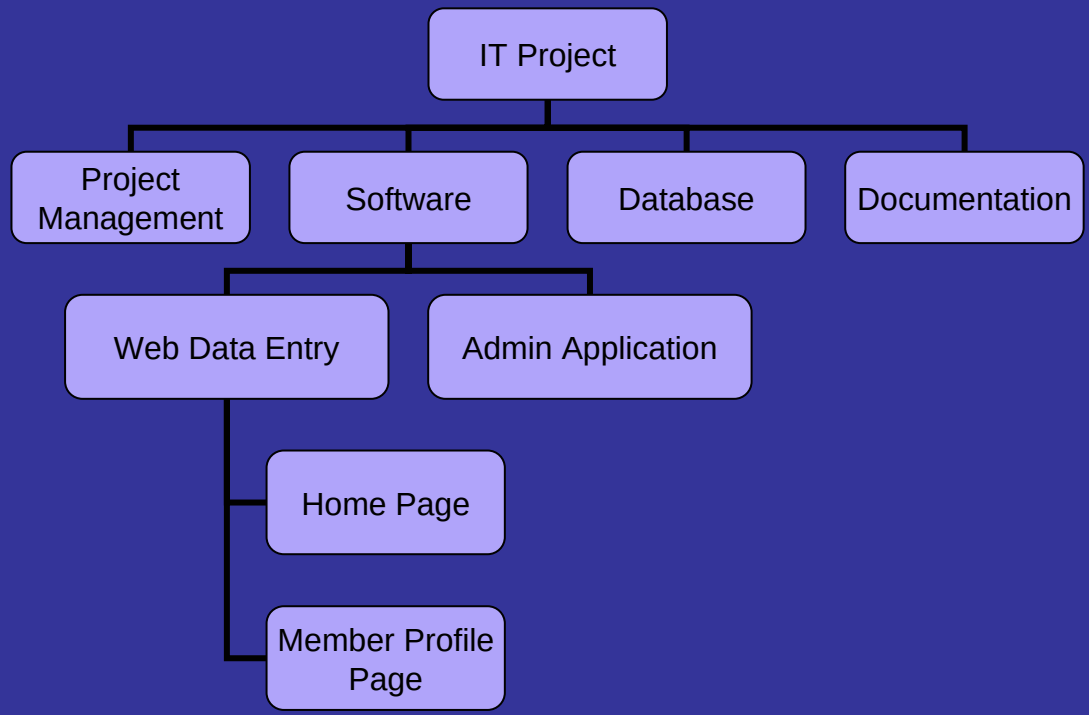
- Plan the work
  - "Without a plan, any path will do"
  - Fundamental to project success
  - Project plan not = project schedule
  - Team collaborates on WBS + task estimates
  - Provides focus and accountability
- Work the plan
  - Capture actuals (work progress data)
  - Respond quickly to reality to not miss milestones
  - (Rarely done)

Project Plan
(or RUP Iteration Plan)

- Documents *what's* to be done, by *whom*, by *when*
- Contents:
  - Scope
    - » Purpose, deliverables, risks, assumptions, constraints, relationships to other systems / projects
  - Time Table
    - » SDLC approach, milestones, major external dependencies, 1st cut project schedule
  - Resources
    - » Staffing, team organization, equipment & facilities
  - Evaluation / acceptance criteria

Work Breakdown Structure

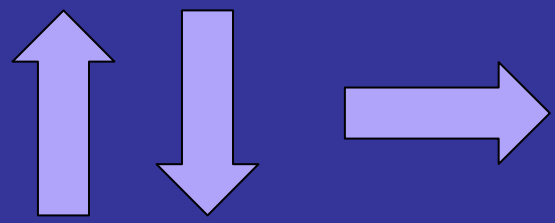
- Hierarchical ordering of project deliverables into "work packages"
- Entire scope is represented in WBS
- Value: provides basis for scheduling, costing, risk planning, scope mgmt, resource planning
- Excellent communications tool with stakeholders



Tip 7: Iterate Product Releases

- What
  - Deliver a product in several 2-3 month releases
  - Vs. one long-term “elephant” (big bang) release
- Benefits
  - More responsive to rapidly changing business needs
  - Provides some functionality sooner to stakeholders
  - Helps shape future requirements
  - Reduces technology risks
- How
  - Help stakeholders prioritize new functionality
  - Use an iterative SDLC (like RUP)

Tip 8: Communication



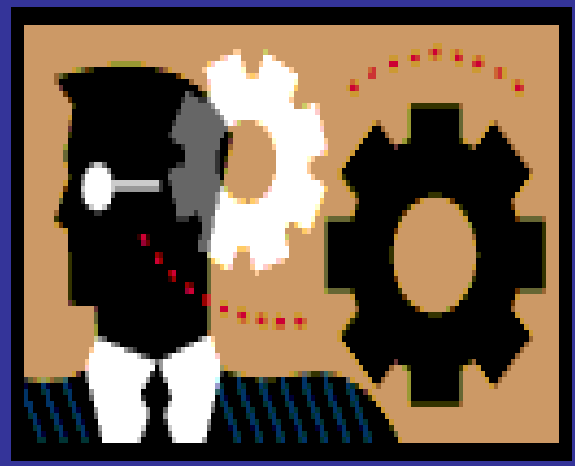
- Up, down, sideways
- Manage customer expectations
  - Communicate early, often, focus on end product
  - Yes, status reports can be effective!
  - Value: helps assure customer accepts solution
- Documentation goals
  - "Nothing is decided until it is written down"
  - Focus on documents that save development time
    - » Errors found earlier cost less to fix

Tip 9: Teamwork

- A group is not = team
- Team "ownership" of deliverables (collaboration)
- Critical: dedicated vs. part-time resources
- Human factors
  - Recognize individual accomplishments
  - Be aware of & utilize strengths
  - Be aware of weaknesses, add members to compliment
  - Understand members' personal goals
  - Fit "stretch" assignments to goals
  - Deal with conflicts
  - Humor & celebration

Tip 10: Good PM Tools

- WBS
- Risk Log, Issues Log
- The “One Page” status report
- Microsoft Project Server 2002+
  - Easy team entry of actuals
  - Status reporting
  - Emails reminders to team members
- Non-Status Team meetings
- 7x24 Product Support Plan



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Use Experienced PMs

The Standish Group 2003 Chaos Report

34% of projects succeed (100% improvement over 1994)

15% of projects fail (down from 31% in 1994)

Why the improvement?

"People have gotten a lot more savvy in project management"

- Jim Johnson, Standish Chair

Invest in PM Training

- Mistake: “promoting” technical persons to PMs
- Quality skills require investment + time to develop
- Suggested “Required” Training
  - Apprenticing around good role models (example: PMI mentoring)
  - Classes
    1. Project Management Workshop (the basics)
    2. Building quality into software development
    3. Managing projects using scheduling tool (M/S Project)
    4. Team Building (leadership, mgmt & communication)

Use A “Lean” Approach to PM

- Each PM Tip is one arrow
- Kill the biggest dragon first
- PM Principles are the same
- How and order of use varies depending on challenges

- ***This is KEY to effective PM***

Summary

- Form work into projects
- Understand the business
- Manage by influence
- Use “Armageddon” risk management
- Collaborate
- Kill the biggest dragon - one arrow at a time

Questions & Answers

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Reference Material

Good Books for Project Managers

Dynamic Scheduling with M/S Project 2002	Eric Uyttewall, PMP
The Rational Unified Process, an Intro	Philippe Kruchten
The Complete Idiot's Guide to Project Management	Sunny and Kim Baker
Software Project Survival Guide	Steve McConnell
Rapid Development	Steve McConnell
Project Management Body of Knowledge	Project Mgmt. Institute
Project & Program Risk Management	Project Mgmt. Institute
The Heart of Change	John Cotter
Dealing with Conflict Instrument	Alexander Hiam

PM Web Sites

- www.pmi.org
- www.construx.com/survivalguide
- www.method123.com
- www.spottydog.u-net.com/PM_Q&A.html

Manage Customer Expectations

1. Set initially in documented “proposal”
2. Reinforce in project plan at “start of project”
3. Remind/correct in status reports and meetings
4. Prepare customer for “bad news” carefully and early
5. Modify through agreed upon, documented Change Requests
6. Evaluate achievement in post-project debriefing

Dealing with Conflict
by Alexander Hiam

- Conflict-handling styles

Avoid	I Lose, You Lose
Accommodate	I Lose, You Win
Compete	I Win, You Lose
Compromise	We Both Win, We Both Lose
Collaborate	I Win, You Win

- Each is appropriate at some time depending on:
  - Importance of relationship
  - Importance of outcome

- Obtain from www.hrdpress.com

IT Related Federal Regulations

- Security
  - FIPS PUB 199
  - NIST SP 800-60, Vol. I and II
  - NIST SP 800-53
- Privacy Rules
  - E-Government Act of 2002
    - » Sept. 29, 2003 OMB Memorandum
  - Personally Identifiable Information
  - Protected Health Information
- PMs need to consider these in their projects

Use Iterative SDLC

- Establish, tailor, maintain the “road map” - SDLC
- “Iterative” Software Development Life Cycle:
  1. Determine objectives
  2. Identify and resolve risks
  3. Evaluate alternatives
  4. Develop & verify iteration deliverables
  5. Plan next iteration

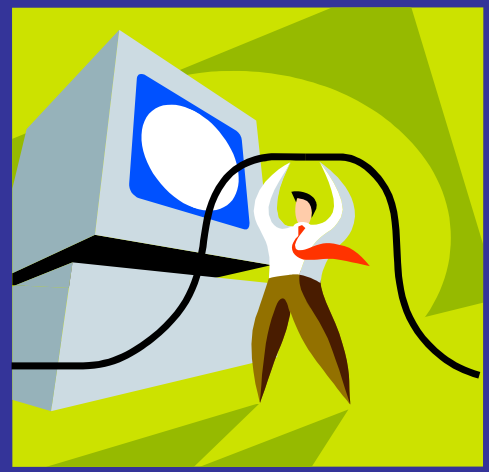
- No one “perfect” SDLC
  - ➔ Have one, use it consistently -- not rigidly
  - – Critical success factors: change control, quality

Use Iterative SDLC

- Key benefits of iterative approach (vs. waterfall):
  - Provides some functionality sooner to stakeholders
  - As costs increase, risks decrease
  - Handles “emerging” technologies better
  - Better management of changing requirements
  - Better management of software quality
- CDC/IRMO using Rational Unified Process (RUP)
  - Customize to needs of an organization
  - Good tools support (Requisite Pro, Rose, CQ, CC)
  - RUP Training available

“Team” Problem Solving

- Technical problems are complex
  - Cross-disciplinary boundaries
  - Security, permissions, network infrastructure
  - Long time to troubleshoot / resolve
  - Technology “nightmares”



- Joint real-time troubleshooting
  - Get everyone in same room (& cubicle)
  - Identify causes
  - Identify quick-fix & long-term solution

Product Support Plan

- Reduces down time in 7x24 HA environments
- Data center staff can make more decisions
- Suggested contents
  - Functional overview
  - System architecture
  - Platform environment
  - Restoration suggestions
  - Troubleshooting matrix
  - Support contacts
  - Emergency change guidelines